

- 7; -

C L A I M S

1. Process to separate solids from a solids laden  
gaseous flow containing more than 100 mg/Nm<sup>3</sup> solids by  
performing the following steps:
  - 5 (a) separating solids from the gaseous flow using a gas-  
solids separator resulting in a gaseous flow containing  
less than 50 mg/Nm<sup>3</sup> solids and an underflow comprising  
the separated solids and part of the gaseous flow as fed  
to the gas-solids separator;
  - 10 (b) separating part of the solids from the underflow in a  
cyclone wherein solids and a gaseous flow containing  
still some solids are obtained; and
  - (c) contacting the gaseous flow obtained in step (b) with  
water to separate the solids and obtain a gaseous flow  
containing between 0 and 50 mg/Nm<sup>3</sup> solids; and
  - 15 (d) combining the gaseous flows which are poor in solids  
as obtained in step (c) and as obtained in step (a).
2. Process according to claim 1, wherein the solids  
laden gaseous flow contains between 100 and 500 mg/Nm<sup>3</sup>.
3. Process according to any one of claims 1-2, wherein  
20 the solids content in the gaseous flow as obtained in  
step (d) is between 10 and 50 mg/Nm<sup>3</sup> solids.
4. Process according to any one of claims 1-3, wherein  
the gas-solids separator is a multi-separator vessel  
comprising of a plurality of parallel operated cyclonic  
25 gas-solids separators.
5. Process according to any one of claims 1-4, wherein  
the ratio of mass of water to mass of gas contacted in  
step (c) is between 1.5 and 2.0.

- 8 -

6. Process according to any one of claims 1-5, wherein the solids content in the gas after contacting with water in step (c) is smaller than 50 mg/Nm<sup>3</sup>.

5 7. Process according to claim 6, wherein the solids content in the gas after contacting with water in step (c) is between 0 to 5 mg/Nm<sup>3</sup>.

8. Process according to any one of claims 1-7, wherein the gas flow containing less than 50 mg/Nm<sup>3</sup> solids as obtained in step (a) is fed to a gas expander turbine and  
10 wherein step (d) is performed downstream said gas expander turbine.

9. Process according to any one of claims 1-8, wherein the solids as obtained in step (b) are continuously fed to a collecting vessel, from which vessel the solids are  
15 discharged non-continuously to the environment via a lock-hopper vessel.